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Serial No.: 10/566,617 Examiner: Jill M. Grav

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1-23. (Canceled)

24. (Currently amended) A method for producing a fiber structure containing a filleraffixed fiber including a fiber, a binder resin on the fiber surface, and a filler affixed to the binder resin, comprising:

providing a filler-dispersed solution in which the filler is dispersed to the fiber structure,

next, performing heat-and-humidity treatment on the binder resin that includes heat-and-humidity gelling resin in a heat and humidity atmosphere to cause the heat-andhumidity gelling resin to gel, so that the filler is affixed to the fiber surface by the binder resin that has been subjected to heat and humidity to form a gel material, and

forming a filler-affixed fiber,

wherein the heat and humidity atmosphere has a temperature range from not less than the gelling temperature of the heat-and-humidity gelling resin to not more than the melting point minus 20°C,

wherein the heat-and-humidity treatment is a treatment performed with steam, wherein the heat-and-humidity gelling resin is in a gel state when subjected to heat and humidity,

wherein the fiber and the binder resin are at least one combination selected from among:

- (I) conjugate fiber that includes a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component,
 - (II) a mixture of the conjugate fiber and another fiber, and
- (III) a mixture of the conjugate fiber and heat-and-humidity gelling resin, wherein the fiber structure is produced with the fiber and the binder resin, and

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wherein a heat-and-humidity gelling conjugate fiber is formed by the fiber and the binder resin, the heat-and-humidity gelling conjugate fiber including a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component.

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25-27. (Canceled)

- 28. (Original) The method for producing a fiber structure according to claim 24, wherein the filler-dispersed solution is an aqueous solution or an aqueous solution that includes a heat-and-humidity gelling resin.
- 29. (Currently amended) A method for producing a fiber molded body made by molding a fiber structure including a fiber, a binder resin on the fiber surface, and a filleraffixed fiber affixed to the binder resin, comprising:

providing a filler-dispersed solution in which the filler is dispersed to the fiber structure;

next, performing a heat-and-humidity mold processing on the fiber structure in a pair of metal dies a metal die to cause the binder resin including heat-and-humidity gelling resin to gel under heat and humidity in a heat and humidity atmosphere, so that the filler is affixed to the fiber surface by a gel material produced by causing the heatand-humidity gelling resin to gel; and

forming a filler-affixed fiber and molding the fiber structure into a predetermined shape,

wherein the heat-and-humidity gelling resin is in a gel state when subjected to heat and humidity,

wherein the fiber structure including includes the fiber and the binder resin is produced, and

wherein a heat-and-humidity gelling conjugate fiber is formed by the fiber and the binder resin, the heat-and-humidity gelling conjugate fiber including a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component.

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(Original) The method for producing a fiber molded body according to claim 29, 30. wherein the heat-and-humidity mold processing is processing in which a fiber structure that includes moisture and filler is inserted into a pair of metal dies, and a heat-andpressure treatment is performed.

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- (Original) The method for producing a fiber molded body according to claim 29, 31. wherein the heat-and-humidity mold processing is contact pressure mold processing in which processing is performed with a pressure at which the fiber structure and the metal dies make contact.
- (New) The method for producing a fiber structure according to claim 24, wherein 32. the heat-and-humidity gelling resin is ethylene-vinyl alcohol copolymer resin.
- (New) The method for producing a fiber structure according to claim 24, wherein 33. the average particle diameter of the filler is in a range of 0.01 to 100 μm .
- (New) The method for producing a fiber structure according to claim 24, wherein 34. the filler is inorganic particles.
- (New) The method for producing a fiber structure according to claim 34, wherein 35. the inorganic particles are at least one selected from alumina, silica, tripoli, diamond, corundum, emery, garnet, flint, synthetic diamond, boron nitride, silicon carbide, boron carbide, chrome oxide, cerium oxide, iron oxide, colloid silicate, carbon, graphite, zeolite, titanium dioxide, kaolin, clay, and silica gel.
- (New) The method for producing a fiber structure according to claim 24, wherein 36. the filler includes porous particles.

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37. (New) A method for producing a fiber structure containing a filler-affixed fiber including a fiber, a finder resin on the fiber surface, and a filler affixed to the binder resin, comprising:

providing a filler-dispersed solution in which the filler is dispersed to the fiber structure;

next, performing heat-and-humidity treatment on the binder resin that includes heat-and-humidity gelling resin in a heat and humidity atmosphere to cause the heat-and-humidity gelling resin to gel, so that the filler is affixed to the fiber surface by the binder resin that has been subjected to heat and humidity to form a gel material; and

forming a filler-affixed fiber,

wherein the heat-and-humidity treatment is a treatment of causing contact with a heated body, in which the heated body has a surface pressure of 0.01 to 0.2 MPa,

wherein the heat-and-humidity gelling resin is in a gel state when subjected to heat and humidity,

wherein the fiber and the binder resin are at least one combination selected from among:

- . (I) conjugate fiber that includes a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component,
 - (II) a mixture of the conjugate fiber and another fiber, and
- (III) a mixture of the conjugate fiber and heat-and-humidity gelling resin, wherein the fiber structure is produced with the fiber and the binder resin, and wherein a heat-and-humidity gelling conjugate fiber is formed by the fiber and the binder resin, the heat-and-humidity gelling conjugate fiber including a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component.
- 38. (New) The method for producing a fiber structure according to claim 37, wherein the heat and humidity atmosphere has a temperature range from not less than the gelling temperature of the heat-and-humidity gelling resin to not more than the melting point minus 20°C.

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- 39. (New) The method for producing a fiber structure according to claim 37, wherein the filler-dispersed solution is an aqueous solution or an aqueous solution that includes a heat-and-humidity gelling resin.
- 40. (New) The method for producing a fiber structure according to claim 37, wherein the heat-and-humidity gelling resin is ethylene-vinyl alcohol copolymer resin.
- 41. (New) The method for producing a fiber structure according to claim 37, wherein the average particle diameter of the filler is in a range of 0.01 to 100 μm .
- 42. (New) A method for producing a fiber structure containing a filler-affixed fiber including a fiber, a finder resin on the fiber surface, and a filler affixed to the binder resin, comprising:

providing a filler-dispersed solution in which the filler is dispersed to the fiber structure;

next, performing heat-and-humidity treatment on the binder resin that includes heat-and-humidity gelling resin in a heat and humidity atmosphere to cause the heat-and-humidity gelling resin to gel, so that the filler is affixed to the fiber surface by the binder resin that has been subjected to heat and humidity to form a gel material; and

forming a filler-affixed fiber,

wherein the heat-and-humidity treatment is a treatment of causing contact with a heated body, and a treatment in which the heated body is compression molded by a pair of heat rolls, in which the heat rolls have a line pressure of 10 to 400 N/cm,

wherein the heat-and-humidity gelling resin is in a gel state when subjected to heat and humidity,

wherein the fiber and the binder resin are at least one combination selected from among:

- . (1) conjugate fiber that includes a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component,
 - (II) a mixture of the conjugate fiber and another fiber, and

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(III) a mixture of the conjugate fiber and heat-and-humidity gelling resin, wherein the fiber structure is produced with the fiber and the binder resin, and wherein a heat-and-humidity gelling conjugate fiber is formed by the fiber and the binder resin, the heat-and-humidity gelling conjugate fiber including a heat-and-humidity gelling resin fiber component and another thermoplastic synthetic fiber component.

- 43. (New) The method for producing a fiber structure according to claim 42, wherein the heat and humidity atmosphere has a temperature range from not less than the gelling temperature of the heat-and-humidity gelling resin to not more than the melting point minus 20°C.
- 44. (New) The method for producing a fiber structure according to claim 42, wherein the filler-dispersed solution is an aqueous solution or an aqueous solution that includes a heat-and-humidity gelling resin.
- 45. (New) The method for producing a fiber structure according to claim 42, wherein the heat-and-humidity gelling resin is ethylene-vinyl alcohol copolymer resin.
- 46. (New) The method for producing a fiber structure according to claim 42, wherein the average particle diameter of the filler is in a range of 0.01 to 100 μm.